

# MIMS – Research Area

## Macro Research Team

### Report – May 2022 (as of 10 May 2022)

The ongoing war is the third act of the imperial game that Russia has been playing for a hundred years with Ukraine, in its highly variable forms and regional declinations. Kiev has always been disputed between Moscow and its western adversary, yesterday the German Reich, today NATO, the European empire of America. Ukraine was already decisive in the First World War, when Lenin handed it over - formally independent - to the Germans with the peace of Brest-Litovsk (1918), except for reinventing it as Soviet in 1922, after the bloody civil war (images that arrive daily from the front bring to mind the description of Kiev under siege in 1918 depicted by Bulgakov in "The White Guard"). Bleeding again in WW2, between Barbarossa and red counter-offensive. Hardly "pacified" by the Soviets, yet capable of setting up for another ten years a fierce warfare in its western regions against the Moscow central government. For thirty years, it has been poised between the West and Russia. Until the current conflict, not necessarily the last. Waiting, perhaps, for the return to the classic Berlin-Moscow clash, if we are really witnessing the rebirth of "geopolitical Germany", a revolution announced by Chancellor Scholz's decision to invest 100 billion euros in German rearmament and to spend more than 2% of GDP on defence in the coming years. Funeral of Merkelism.

#### The end of Pax Europaea

In the beginning, Kremlin misjudged the war. It underestimated the enemy, under the illusion that it was the same as eight years ago, when during the pro-European Maidan riot the green men took Crimea and stirred up the Donbass without (almost) firing a shot, while the European Union stood by and watched. In the meantime, the Ukrainian army has been armed and trained by NATO, has learned to move like a formation of guerrillas instead of regular troops, has welcomed the support of public opinion, ready to face adversity. Sure to bend the Ukrainians with the reproduction of the unfortunate "shock & awe" of American memory, Moscow has launched itself on the ground with a



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reduced number of men and too many tanks, to quickly reach Kiev and impose the regime change. With the ultimate goal of transforming Ukraine into a demilitarized and neutral buffer state, with entire regions amputated. All this while the crucial variable of the White House, Volodymyr Zelensky's main referent, is engaged in transforming Ukraine into a new Afghanistan for Russia (as Hillary Clinton said on behalf of Joe Biden), to compact the Western front and reduce Moscow's influence, at least until China will not profit from such distraction. As the clock is ticking on the cross propaganda of the belligerents, the world we believed to know is changing in front of our eyes. Until 24th February 2022 we, Euro-westerners, were sure to eternally enjoy the Pax Europaea. Actually, the idea of Universal pacification

has never taken root in other peoples. Americans seem to be at the crossroads, due to indigestion from a-strategic wars (not a year has passed since the spoiling retreat from Kabul). Waiting to start again. Decades of post-historical and a-geographical indoctrination, in which the only goal pursued (with little foresight) is mere enrichment (the principle of "it's the economy, stupid!"), have plunged us into a Metaverse ante litteram. Putin took us by surprise.

### The Russian imperial dream

The Ukraine aggression is necessary for Moscow to confirm its role as empire. The sense of encirclement, the fear of disintegration ("raspad") of the multi-ethnic motherland and the constant dread of an external threat have always tormented Russian people and their strategists. A matter of life and death. Without an empire, Russia has no reason to exist. History, geography, and self-consciousness forbid it to expire as a national state - something for Europeans definitively dumbed down by the Americans. Since 1552 when Ivan the Terrible conquered the Khanate of Kazan and incorporated in his dominions those Islamic and Mongolian lands, which do not belong to the orthodox Christianity and to the Slavic root of the original "Rus", the multiethnic destiny of the Tsarist empire and then of its Soviet remodulation is marked. The Russian Federation is its bleeding stump. Degenerate daughter of the defeat suffered in 1991 without a fight, via suicide of the USSR. Catastrophe exacerbated in 2014 by the breakaway of Ukraine towards the West. So Putin thinks. With him many Russians.

We pay the price of not having regulated relations with Moscow in the wake of the '89. We Westerners, the United States in the lead, could and should have understood then that without including the weakest Russia ever in the new continental balances we would then or sooner have run into its poisoned ghost, swollen with frustration like any humiliated power. The revisionism of the defeated is the other face of the arrogance of the victors.

### The Sino-Slavic alliance

In these months we are witnessing a further rapprochement of interests between Beijing and Moscow. The conflict in Ukraine is compacting it and pushing it towards that partnership without limits evoked even before the Kremlin started the invasion. Relegated to the margins by a hostile Europe, Moscow has turned to the East, while calibrating its openings to China in order not to be crushed.

In both Russia and China, military escalation is attributed to NATO pressure on the western borders of the Federation. In both countries, it is also believed that once the account with Moscow will be settled, the West - including Asian appendices - will aim at reducing Beijing's ambitions in order to restore the American unipolar role. China is studying the evolution of the conflict and the Americans' treatment of their enemies, as it looks to its own Ukraine: Taiwan. The island, the first producer and exporter of microchips in the world, will be soon the next land of clash between the two great superpowers for global hegemony, though the invasion is delayed for a while (in the party's plans it will be part of China by 2049).

Russia and China must combine forces and take side to keep their power. The two Eurasian powers stand together against the expansion of the Atlantic Alliance to the east and the creation of anti-Chinese coalitions in the Indo-Pacific, saying they are ready to integrate the Russian-led Eurasian Economic Union with the new Chinese Belt and Road Initiative. Hence the opening of the Russian energy market (and not just that) to China and India, ready to adopt the ruble in transactions. While the Asian countries are compacting and emphasizing the balance of power within the Western bloc, the final clash for global hegemony is only postponed.

### Financial Sanctions: removal from SWIFT

One of the harshest sanctions implemented by the US, UK, Canada, and the EU is the removal of selected Russian banks from SWIFT, announced on February 26th. The Society of Worldwide Interbank Financial Telecommunication (SWIFT) is the primary financial messaging service for cross-border transactions whose users amount to more than 11,000 financial institutions in more than 200 countries and territories around the world. Founded in 1973, SWIFT is a member-owned cooperative headquartered in Belgium. The importance of SWIFT is increasing with 8.4 billion messages sent in 2019, compared to 3.8 billion in 2009.

Usually, a simple cross-border payment involves the following steps: initiation of the payment by the sender with their bank, the sender's bank sending financial messages to the recipient's bank with information and instruction of the transaction, and the verification by the recipient's bank on the legitimacy. Finally, the payment is settled by a clearing and settlement institution. SWIFT does not provide clearing and settlement services, that is, they do not handle the actual money transfers itself. SWIFT message services

are used for various types of wire transfers of information: buying and selling of securities, foreign exchange and international currency transfers, and more.

### Consequences - removal from SWIFT

Russia's domestic payment system could also be disrupted as all credit cards issued by the major networks (VISA, Mastercard, Amex etc.) operate through SWIFT. The Russian public responded by a bank run amid fears that they might not be able to use credit cards for day-to-day purchases. A total of three trillion Rubles (approximately \$46 billion, representing 6.5% of the country's monetary base) was withdrawn on the day the SWIFT ban was announced. For the international community, part of the debate on whether to cut Russia out of SWIFT network is how to keep channels for energy import. Also, another issue is the exposure of Western banks to Russia. Foreign banks have about \$121 billion in assets owed to them by Russian-based entities and it would be considerably difficult to collect them if Russia is completely excluded from the network. The EU's decision to delist some of Russian banks – but not all of them – represents a compromise. While some countries push towards delisting more banks, others have argued that it is necessary to keep some Russian banks in the network to help Europe pay for its energy imports and other transfers.

Exclusion of Russia from SWIFT might leave a permanent scar on the international integrity of financial markets and the US dollar hegemony. The success and efficiency of a payment network depends on widespread adaptation and use. When lighter SWIFT sanctions were placed on Russia in 2014 following the annexation of Crimea the country was quick to develop their own financial messaging services intended for domestic payments. Russia also decreased the proportion of their foreign reserves in US dollars and strengthened ties with China. China offers its own messaging service Cross-Border Interbank Payment System (CIPS) which can settle international claims in Yuan. Yet, CIPS remains miniscule compared with SWIFT, which has more than 11,000 members and handles over 42 million transactions a day. CIPS has only about 1,300 members, mainly in China, and processes about 13,000 transactions a day. The ban from SWIFT could also encourage the use of cryptocurrencies to evade financial sanctions all together.

### Financial Sanctions: ban on USD debt payments

On April 4th the US cut off the Russian access to its frozen assets in US banks. Foreign currency reserves

held by the Russian Central Bank at US financial institutions had already been frozen since February 28th. However, they had allowed access to the funds for coupon payments of dollar-denominated sovereign bonds on a case-by-case basis. Following the refusal by JP Morgan, the corresponding bank responsible for handling the transaction, Russia has been forced to repay its debt through Russian financial institutions in Rubles for dollar-denominated bonds. Paying back in rubles where another currency is specified will constitute a default. Indeed, the ratings agency S&P Global placed Russia under 'selective default'. The decision came from an expectation that Moscow would be unable to repay in full by the end of the grace period amid intensifying sanctions. However, on April 29th, five days before the end of the grace period, Moscow managed to avoid default last-minute, by making overdue interest payments in dollars. With many other payments in foreign currencies due soon, it can be said that the possibility of a historic default is still there.

### Financial Sanctions: Asset Freeze on Oligarchs

'Oligarch', a member of a small group of the ruling class, has a special meaning when it relates to Russia. It refers to a rich business leader with a political influence. As of March 17, 877 individuals and 72 entities are subject to asset freezing in the EU on the ground that they have profited from close ties with Vladimir Putin and that their wealth has supported his Ukrainian military campaign. Also, governments may opt for sanctions against individual owners instead of the firm itself to avoid a further rise in commodity prices. Governments have the authority to temporarily freeze assets of individuals or entities in their jurisdiction, without the proof of criminality. It's important to note that those asset freezing orders are distinct from seizing the assets – governments usually are not authorized to take away the ownership without proving lawbreaking. Frozen assets include villas, yachts, artworks, real estates, and private jets.

### Financial Sanctions: Toward Russian Banks

The US government has imposed both blocking and non-blocking sanctions on Russian banks. Full blocking sanction not only prohibits any bank-to-bank transaction with a US entity located anywhere, but also extends to consumer transactions (e.g., credit card transactions), asset freezing of US citizens in control of properties owned by a listed entity, asset freezing of entities owned at least 50% by a listed party. For non-blocking entities, the government can choose which activities to prohibit. For instance, the Russian Central Bank, subjected to non-blocking sanction, is barred from

engaging in transactions with a US person.

Recently added full blocking banks include Sberbank, state-run and the biggest bank in Russia holding 1/3 of banking assets, Alfa bank, the biggest private bank and the fourth largest financial institution in Russia. Together with measures implemented in February, the US blocks 6 out of the 10 largest Russian banks, representing 60% of Russia's banking assets. Meanwhile, the EU has only blocked 4 out of the same 10 banks. In addition, the bloc does not block the above-mentioned two banks for their roles in energy-related transactions.

### Trade Sanctions: Energy import ban

There has been a long debate on whether the EU should stop buying energy from Russia. The EU relied on Russia for 40% of its energy needs last year. Although there is a consensus within the EU that the Russian dependency should be reduced as soon as possible, the fear of a recession and mass unemployment persists. In early April the EU countries agreed upon a ban on coal imports from Russia worth €4bn a year. Countries such as Germany, Italy, and Hungary are opposing a total embargo, while Poland and Baltic countries are keen on promoting it. The US, which last year received about 3.5 percent of its oil from Russia and none of its natural gas, has already moved to ban oil imports and recently committed to routing more liquefied natural gas to its European allies. In the recently-introduced sixth round of sanctions, the EU pledged a six-month phase out of Russian oil imports. This is a bolder step toward Moscow, compared to their previous vow to cut Russian gas imports by two-thirds by the end of this year and end its dependence on Russian fossil fuels by 2030.

### Implications: what changes?

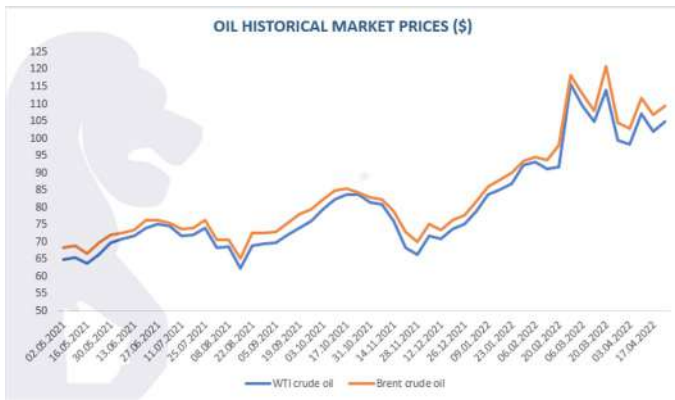
Commodity prices rallied month-on-month (m-o-m) amid geopolitical developments in Eastern Europe. Prices experienced significant volatility in the 1Q22, but continued to trend upwards supported by supply uncertainties. However, lockdowns in China's main economic hubs are suppressing demand for commodities and creating downside risk to prices. The US Federal Reserve announced an interest rate increase in March 2022. This increase followed rate hikes by the Bank of England and hawkish comments by the European Central Bank as a means to cool rising inflation. So far, the shift towards hawkish monetary policies has not had a significant impact on selected commodity prices. Thus, additional tighter monetary policies may be seen in the near term as commodity prices remain elevated and will likely remain so if

tensions in Eastern Europe continue.

### Oil Market Movements

Crude oil spot prices in March were subject to a wide range of price pressures and sustained price volatility throughout most of the month. Russia's further invasion of Ukraine, which began on February 24—as well as trade disruptions, OPEC sanctions, and private sector divestments from doing business in Russia—continued to contribute to substantial uncertainty in petroleum markets during March. The conflict in Ukraine increased crude oil prices to over \$100/b in late February, and above \$100/b for all but two trading days in March. On March 8, the United States government announced a ban on petroleum imports from Russia, further contributing to temporary price increases associated with trade displacement. In addition, weather-related disruptions at Kazakhstan's Caspian Pipeline Consortium (CPC) terminal along Russia's Black Sea Coast, as well as a fire related to a Houthi missile attack at a Saudi Aramco oil storage and distribution facility in Jeddah, contributed to additional volatility and risk of supply disruptions. The WTI gained almost \$17/b and the Brent crude oil spot price averaged \$117 per barrel in March, a \$20/b increase from February. The OPEC Reference Basket price increased \$19.53, or 20.8%, to settle at \$113.48/b. Oil futures prices in March witnessed elevated volatility due to the uncertain short-term oil supply and demand outlook. On March 31, the White House announced a release of 1 million barrels of crude oil per day for a period of six months from the U.S. Strategic Petroleum Reserve (SPR) to expand supply and ease pressure on prices. On April 7, the International Energy Agency (IEA) confirmed an additional coordinated release. These releases from strategic reserves have contributed to downward oil price pressure by offsetting market perceptions of the risk of supply disruptions. In addition, city-scale mobility restrictions in China related to surging cases of COVID-19 contributed to heightened demand-side risks and downward pressure on crude oil prices during the month. The front-month futures price for Brent crude oil settled at \$100.58 per barrel on April 7, 2022, a decrease of \$4.39/b from the March 1, 2022, price of \$104.97/b. The front-month futures price for West Texas Intermediate (WTI) crude oil decreased by \$7.38/b during the same period, settling at \$96.03/b on April 7.





Source Refinitiv

### Natural Gas Market Movements

The US natural gas spot price at Henry Hub, Louisiana is the benchmark price reference for the US natural gas market and an important price reference in global gas trading. Natural-gas prices have soared in the past few weeks, and investors are now betting that the surge is going to last. In March, the Henry Hub natural gas spot price averaged \$4.90 per million British thermal units (MMBtu), which was up from the February average of \$4.69/MMBtu. Liquefied natural gas (LNG) exports increased from March levels, contributing to higher prices in April. In the first days of April US natural gas futures topped \$7 per million British thermal units, as global demand for US LNG remained elevated. Strong demand from overseas due to the energy crunch exacerbated by the war in Ukraine has left inventories well below average for the time of year despite a mild winter (inventories are now sitting 23.9% lower than the same period last year). Even before the war in Ukraine started, the US LNG exports rose 13% in the three months to January compared with the same period a year earlier, while gas production was up by less than 5%. Currently, 15 EU countries and the United Kingdom import LNG. Eleven of these countries account for 99% of Europe's total LNG imports and utilization of LNG import capacity was relatively high this winter, averaging 66% compared with 39% last winter. Regionally, the European natural gas pipeline grid is not fully integrated between its northern and southern parts. Some countries, such as Belgium and the Netherlands, act as transit countries, delivering natural gas to other parts of Northwest Europe. Other countries in Southern Europe, including Spain, Portugal, Italy, and Greece, have limited pipeline interconnectivity and, therefore, use LNG imports primarily for domestic consumption. The fate of natural gas was less certain a year ago as countries made pledges to reduce carbon emissions more quickly. But it is becoming increasingly clear that natural gas demand will stay high for several more years, if not decades. Proponents consider it a key "bridge" fuel as countries

build out their renewable energy portfolios.

### Wheat Market Movement

Russia is the world's top wheat exporter and the largest producer after China and India. And Ukraine is one of the top five wheat exporters worldwide. The two countries account for about 29% of global wheat exports. Wheat futures have risen by about 40% so far this year due to Russia's invasion of Ukraine, which began on February 24 and continues to disrupt grain shipments from the Black Sea region where Ukrainian port infrastructure has been destroyed, driving up food prices. Chicago wheat futures were at \$11.3 per bushel in mid-April, the highest in over five weeks and approaching an all-time high of \$12.43 hit in March. Middle Eastern and North African countries rely heavily on wheat imports from Russia and Ukraine. The current war could lead to a severe food crisis in a region already under pressure because it could disrupt the wheat supply chain. Egypt is the world's top wheat importer, with around 70% of its wheat coming from these two countries. Some 80% of Tunisia's grain also hails from them. Lebanon imports 60% of its wheat from Ukraine. If Russian troops block access to the Black Sea, the supply of Ukrainian wheat to the MENA region will be disrupted. If farmers in Ukraine aren't able to cultivate and harvest wheat crops by July 2022, the supply chain will be interrupted. But even if they are, there's no guarantee they will be able to use the necessary infrastructure to transport grain to the ports. The market price of wheat could become a systemic problem for poorer countries in the MENA region. Although MENA countries could diversify their supplies by trading with Western companies, transportation delays could cause a severe shortage. Some MENA countries grow wheat themselves, but domestic production doesn't fully cover overall demand. Through global wheat markets, it is clear the impacts of Putin's war of choice will be felt far beyond Europe.

### Immediate Effects

Prior to the Ukraine Invasion, the commodity markets were already struggling with the ongoing COVID-19 pandemic. Among others, poor harvests in South America, supply chain problems, and strong global demand had decreased grain and oilseed inventories which had caused prices to soar to their highest levels since 2013. Also, the vegetable oil prices were already

at record levels due to similar reasons, including sharp increase of palm and soybean oil in biodiesel production. Key energy-intensive inputs (fertilizer, pesticides, fuel etc.) were already at near record levels as well.

Over the last three decades the Black Sea has become increasingly crucial in the world supply of grains and oilseeds, including vegetable oils. The Black Sea region was a net importer of grain in the early 1990s after the fall of the Soviet Union. However, nowadays 12% of total calories traded in the world are from Russia and Ukraine. Also, the two countries are in the top five global exporters of cereals and oilseeds (including wheat, maize, barley, and sunflowers).

Specifically, Russia holds 24.1% of the world's wheat supply and Ukraine 10%. The world shares are 23.1% and 49.6%, respectively for sunflower oil. Many emerging countries including countries in North Africa and the Middle East import more than 50% of their cereal, wheat, and barley from Ukraine and Russia. Ukraine is also a notable supplier of maize to the European Union and China. Russia also has a world market share of 15% in nitrogenous fertilizers and 17% of global potash fertilizers.

Therefore, with the invasion of Ukraine on the 24th of February, commodity prices soared with oil reaching \$100 a barrel, wheat prices surging to a nine-year high, and aluminum prices reaching record high. With only a month into the conflict, inflation has increased in many regions including the EU, due to higher food and energy prices. Also, a shortage of wheat has deepened the food crisis in emerging economies such as Egypt. Oil and gas markets have been the most discussed commodity markets with natural gas prices reaching a record level of €345 per megawatt-hour (MWh) in early March. They have been falling to around €100MWh in the later weeks of March. However, Putin's threats of demanding payment of rubles instead of euros or dollars from "unfriendly" countries created more uncertainty in the European gas market. Brent crude also increased to a multiyear high of \$139 a barrel on March 7, from \$90 in February. Diesel and gasoline price increases are also notable. Aluminum prices have passed the peak they hit in 2008, this March. Russia produces around 6% of the world's aluminum supply. The prices increased even further after Australia's ban of alumina and bauxite (which are used to make metal) exports to Russia. Nickel prices soared to \$100,000 per ton, as a major Chinese producer Tsingshan Holding was forced to buy large amounts to cover its short positions. The market squeeze, due to the Ukrainian conflict, caused London Metal Exchange (LME) to end trading. These high prices have also caused electric-car makers like Tesla and Chinese electric vehicle makers to increase prices.

In addition, UN Secretary-General Antonio Guterres warned of a "hurricane of hunger and a meltdown of the global food system.", as the war had hit supplies of wheat, corn and sunflower oil in several parts of the world.

### Current Situation

Recently, some countries have executed export bans or restrictions on their domestic supplies due to uncertainties which has consequently reduced global supply availability and added upward pressure on commodity prices. As of April 5, 2022, 11 countries have implemented export bans, including Russia, Belarus, Hungary, Serbia, Turkey, North Macedonia, and Egypt, for products ranging from wheat, wheat flour, barley, rye, corn, and oilseeds, to lentils, fava beans, and pasta. Two major oilseed producers have carried out export restrictions: Argentina raised export taxes on soybean from 31 to 33 percent, and Indonesia raised minimum percentage of palm oil output that is required to allocate to the domestic market from 20 to 30. This is important as Argentina holds more than 40 percent of the soybean world supply, and Indonesia holds more than half of the global palm oil supply.

The European Commission has proposed banning Russian coal on, April 5, as part of a new round of sanctions against the Kremlin. European Commission President Ursula von der Leyen announced: "We will impose an import ban on coal from Russia, worth 4 billion euros (\$4.39 billion) per year. This will cut another important revenue source for Russia."

### Predictions and Country Responses

High commodity prices will signal producers to plant more crops. The Northern Hemisphere's winter wheat production will be harvested in a few months so they will not be able to increase supply much. However, this may still lead to additional plantings of spring wheat in the Northern Hemisphere or of winter wheat in the Southern Hemisphere. A major concern for global agricultural producers are the high fuel and fertilizer prices. For example, Brazil relies on imports for more than 80% of their fertilizer requirements, so fertilizer availability and price is a major concern for them. Although these high commodity prices are likely to signal producers to plant more, there is uncertainty about the yield due to the increased fertilizer prices. Also, producers in countries with export restrictions may not be able assist to increase the global commodity supply.

The pressure on Europe to target the Russian energy sector (especially by the United States) is growing. However, there is difference of opinion within the EU about whether to ban Russian energy imports or not.

According to Germany's foreign affairs minister Annalena Baerbock, the EU will end all Russian fossil fuel imports soon, starting with coal.

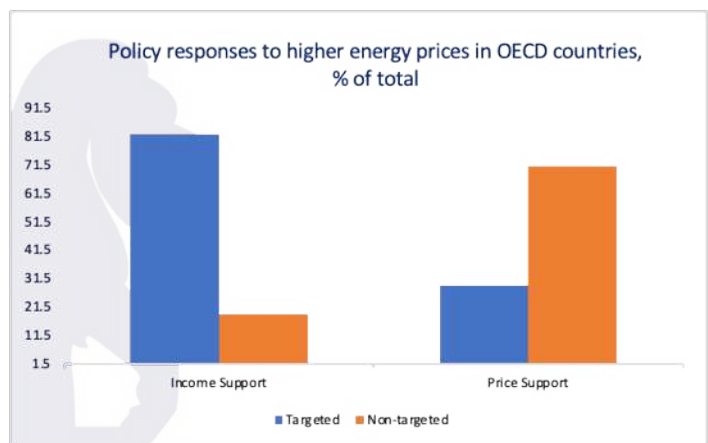
Overall, due to the higher risk premium and the big supply shock, oil price will increase to \$120 bbl and remain there for a while to incentivize demand destruction according to J.P. Morgan Research, under the assumption that no new Iranian volumes enter the market. If Russia were to use oil exports to exert pressure on the West, 2.9 mbd of crude would be at risk, which translates to a \$50 bbl annualized price impact. China remains the wild card in this scenario. The country could opt to buy 1 mbd more of Russian oil at a steep discount and store it, without making any adjustments to its market purchases. On the other hand, it could reduce market purchases proportionally, freeing up to 1 mbd of supply from other sources. However, if disruption to Russian volumes lasts throughout the year, Brent oil prices could exit the year at \$185 bbl, likely leading to a significant 3 mbd drop in the global oil demand. Even if shale production responds to the price signal, it cannot grow by more than 1.4 mbd this year given labor and infrastructure constraints.

Again, according to J.P. Morgan Research, Australian, Canadian, Latin American, and South African commodity producers are likely to benefit from the increase in prices and the share loss of Russia from the global markets. While Latin America will also benefit from higher commodity prices, Middle East is likely to provide stability and benefit from stronger oil prices.

The economic costs of the conflict add on to the inflationary pressures and imbalanced recovery from the pandemic in many countries. Prior to the conflict, although the fiscal stance was planned to tighten gradually in many developed countries, policymakers started reconsidering this decision after the start of the conflict and prioritized some immediate spending such as supporting refugees in Europe, and cushioning the immediate effects of the commodity and food price shocks on households and companies through temporary and well-targeted policies. For the medium term, greater investment in clean energy and higher defense spending are probable to be important in the agenda of many OECD countries. The need for additional fiscal support differs a lot between developing and emerging economies with emerging market economies having to face difficult decisions between ensuring debt sustainability and investor confidence and supporting incomes. However, increased commodity prices may help commodity-exporting countries through increased fiscal revenues which may cushion the shock of higher food and energy prices on household incomes.

By using the NiGEM global macroeconomic model, OECD has created some illustrative simulations of a well-targeted rise in final government spending of 0.5% of GDP for one year in all the OECD economies which show that this could offset around one-half of the estimated decrease in output from the conflict without stimulating inflation much. Non-OECD countries are also likely to benefit, but to a lesser extent, even though they do not have enough the needed fiscal space. This represents the spillovers from better demand and trade in the developed countries.

Countries had already started implementing a range of policies to cushion the impact of large energy price increases prior to the war. These policies now being strengthened further. These policies include income support (e.g. lump sum transfers,) lower electricity tariffs for low-income households, VAT cuts on electricity and gas, reductions in excise taxes on liquid fuels and electricity and energy price freezes. In some countries, even subsidies have been provided to electricity companies. As shown by the chart below the targeted income support and non-targeted price support account for a large portion of the policy responses by OECD countries.



Sources Eurostat and OECD calculations

The war has proved many OECD economies are very reliant on fossil fuels. An important goal for European countries in the medium term is to increase the security of their energy supply. The IEA introduced a 10 Point Plan about decreasing reliance on gas imports from Russia by between one-third and one-half over the next year.

## Macroeconomics Implications for Europe

After the Covid-19 pandemic, the euro area economy followed a positive recovery path, driven by the labor market improvement and helped by policy support. The ECB states that growth should rebound strongly in the euro area over the course of 2022, driven by robust domestic demand. As the labor market is improving further, with more people having jobs and fewer in job retention schemes, households should enjoy higher income and spend more. Despite these positive trends, growth is subdued in the first quarter of 2022 due to high energy prices, labor vacancies in many industries and the immigration threat posed by the Ukraine Crisis. The ECB revised downwards its growth expectations for the block by 0.5%, GDP is now expected to grow by 3.7% in 2022 rather than by 4.2%. Still, it has to be noted that this estimate changes significantly downward in scenarios in which the war will protract itself at length.

The main channels through which the war is expected to damage the European economy are energy prices, business and consumer confidence, and trade.

Firstly we discuss how the war in Ukraine will affect European economic growth and what will be its fiscal cost. Secondly, we will deepen the impact of the Ukraine Crisis in the European labor market, focusing on the role of immigration, providing both information on the EU reaction, and a theoretical framework to discuss the drawback of immigration.

## Energy prices

The steep rise in energy prices is being carried on along value chains and it is currently the main driver of headline inflation, causing a reduction in the firm's capacity to invest and in consumers' purchasing power. Since the ECB is postponing its decision on monetary policy - addressing inflation aggressively would weaken the block economy in the middle of a geopolitical confrontation - a fiscal approach must be taken by European countries to protect the real economy. However, keeping prices low and supporting vulnerable households will be a non-trivial fiscal burden.

At the same time, the weaponization of energy supplies by Russia created awareness about the need for diversification of sources, but achieving this goal will come with further costs. Being this a matter of urgency and strategic importance, governments will need to actively intervene in the development of the necessary infrastructure, supporting the private energy sector with further public spending. According to Pisany-Ferry's estimates in 2022 European countries will need 125 bn euros to face costs connected with the energy crisis.

## Natural Gas Market Movements

Consumers' confidence plummeted across the world as the conflict in Ukraine escalated. However, the usual increase in private savings that comes with periods of low confidence did not materialize. Although real private consumption is decreasing, private savings are shrinking too, as they are being used as a cushion to face the rising cost of living.

The same fall in confidence can be seen in financial markets, too: risk premia rose, making it even more expensive for firms to borrow and thus creating negative pressure on investment. However, thanks to the Next Generation EU funds investment will increase, even though expectations have been revised downwards.

For eastern European countries, their proximity to Ukraine and Russia is becoming a big liability: interest rates on the Polish and Hungarian 10-Years government bonds experienced a steep rise since the start of the war, and this might be problematic as such countries attempt to finance fiscal spending (mainly migrants' welfare and the energy crisis) with debt.

## Trade

The volume of direct trade between European countries and Russia is small, less than 3% of the blocks' trade is directed to that country. However, a large disruption is expected through this channel because European firms might be caught off-guard as their supply chains start to crumble. A study by Deloitte shows that firms have little visibility beyond tier 2 suppliers, and thus they might not have a proper perception of the extent to which they are exposed to disruptions connected with the war. This shock came at a time in which global supply chains hadn't fully recovered from the COVID disruption, therefore aggravating the upward pressure on prices and making it even harder for governments to keep inflation low.

## Fiscal Considerations

Facing the consequences of the Ukrainian war will come at a high fiscal cost. Beside the 125 billion euros to deal with energy, security spending will ramp up (+20bn in 2022), according to this UNHCR report providing assistance to refugees has a cost 10 billion euros per year per million refugees, so an expenditure of 50 bn can be expected by European countries.

In the EU this cost is not distributed evenly, and it falls disproportionately on eastern countries (Poland, Hungary and Czechia in particular), that will struggle to pay for it. An effective distribution of costs is required across member states to ensure the block's stability amid geopolitical tensions.



## The EU Labor Market and Immigration

Migration is a highly discussed topic in the era of globalization. In the last 20 years European institutions have worked to smooth the free flows of goods and capital, but still the movement of people and workers is strictly regulated. In this context the Ukraine Crisis raises questions on the ability of European Countries to deal with a huge amount of people escaping from war. According to UN estimates, more than 5 million have fled Ukraine since the beginning of the war, and more than 6.5 million people were internally displaced. The main hosts are the neighboring countries, such as Poland, Romania, Hungary and Moldova. Unexpectedly there is a high number of Ukrainians who fled from war directly in the attacking country and its allies. Indeed, around 600k Ukrainians migrated into Russia and Belarus.

### UN-Total Refugees Influx from Ukraine in Neighbor Countries

Country	Refugees
Poland	2,825,463
Romania	757,047
Russian Federation	549,805
Hungary	471,080
Republic of Moldova	426,964
Slovakia	342,813
Belarus	23,759

Source: UN

Economic theory suggests that migration should enhance efficiency, by arbitraging away cross-country differences in productivity and unemployment. This means to close international price differential and differences in wages, creating gains from deregulation. In real terms, restrictive policy aims to prevent negative effect on local wages, and unemployment by imposing some gradualism in migration flows. Indeed, one of the issues that the EU faces today is the extent to which Member States are able to adjust to a sudden, and probably permanent, shock.

In the current situation policymakers question whether there exists a tradeoff between the moral duty of evacuating the Ukraine population and giving time to the hosting economies to adjust?

## Current Policies and Context

By the OECD definitions, Ukraine migrants belong to the immigrant population shaped by border changes. The reaction in Europe has been prone to abolish most barriers. The restrictions of people movement across border can take the form of:

- Decreasing the Number of administrative burdens placed on migrants.
- Increasing the legal Length of stay
- Decreasing the Minimum number of years required to apply for citizenship
- Ad hoc rules for asylum seekers

Moreover, being hosting countries such as Hungary, Czech Republic, Slovakia and Poland in the Schengen Area, the free movement of workers must be guaranteed.

In March 2022 the European Union has activated the temporary protection directive, giving the Ukrainian access to integration related and employment services. In the case of US, the country plan to host 100 000 Ukraine immigrants and president Biden has taken severe action to help them, such as increasing the number of immigrants eligible to the 18 months deportation protection and work authorization.

Ukrainian refugees face an already complex situation in the EU, that since 2000 became a long-standing destination attracting most of the immigration from Sub-Saharan Africa and the Middle east. After having dealt with the 2016 Syrian Crisis, the EU enhanced some fast-track mechanisms to facilitate integration procedure, but with significant differences across the union. Despite the crisis faced, still the data on the overall union show an increase in the strictness of migration policies.

As data show, in 2019 Poland, Slovakia and Hungary showed one of the lowest indexes of labor mobility. Despite the crisis faced the overall union showed an

increase in the strictness of migration policies

Country	Labor Mobility	Family Reunion	Long-term Residence	Access to Nationality
Czech Republic	52	57	51	49
France	54	51	48	61
Germany	86	57	60	72
Hungary	40	61	68	31
Italy	66	72	65	50
Poland	38	56	66	56
Slovakia	21	56	54	25
US	67	66	54	61

Economically speaking the main effect of immigration is to alter the labor flow composition, by encouraging migration of both skilled and unskilled individuals.

Migration is a labor supply shock whose consequence depends on the rigidity of the labor supply. In the short term, we do not observe a shock on the labor demand, as migration does not produce new jobs, but increases the labor force participation. In the case of Ukraine, the government requires men ages 18-60 to stay, leaving mainly children, women and elderly the chance to cross the border. On the one hand, inducing a fiscal cost on hosting countries, of increasing the dependency ratio; the ratio between the total non-working population over the actual working population; and the cost of basic welfare services, such as housing and healthcare. On the other hand, this obligation makes it even more difficult to integrate the newcomers in the labor market. Indeed, a significant share of newcomers may not be active in the Ukrainian labor market in the first place and may not become active in the EU as well. Moreover, another problem concerns the mismatch between job vacancies and worker qualifications. For instance, in addition to shortages of lower skilled workers Polish labor market has been struggling with a large deficit of workers with specific qualification.

We will address these questions presenting a series of simple labor market models which can help us in disentangling the immigration effects. Firstly, we need to distinguish between a perfect and imperfect labor market, and homogeneous (only-skilled/only unskilled migrants) vs heterogeneous shocks (mixed migrants). We will pass to IPLM by relaxing some of the assumptions at the core of the PLM models.

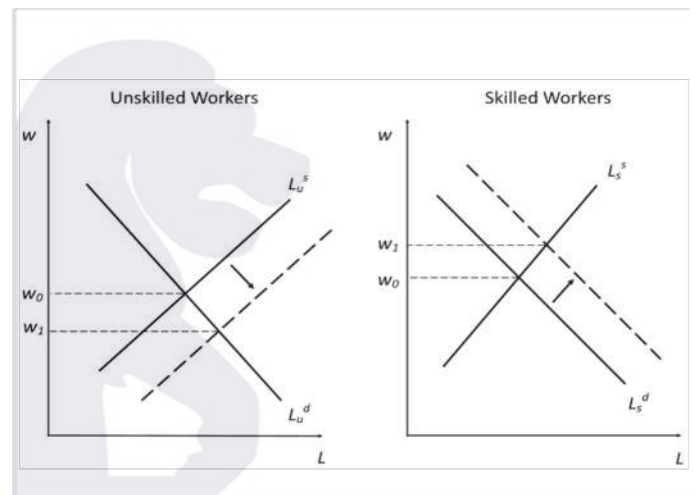
### Dual Labor Market with Heterogeneous Immigration

by Card (2012), immigration changes the composition of the local population, which is why people worry about migration. By relaxing the homogeneity assumption in a perfect labor market, we allow the model to describe two types of workers, skilled and unskilled.

Indeed, we consider 2 labor markets in which there is no skill upgrading, so unskilled cannot become skilled and vice versa. This model suits the Ukraine context, because integration is a long-term process that can allow to increase the individual skill set but has low effect in the short term. In this model we assume that natives and migrants are perfectly substitutable only within each skill group and both are strictly complementary in production. Indeed, we consider production as a Leontief technology: to get a certain amount of production we need the complementarity of both skilled and unskilled workers.

Then labor demand is proportional for skilled and unskilled and if:

- Migration perfectly replaces the skill composition of native population, then we have no effect on wages
- Migrants are all unskilled then, by complementarity, we have an increase in the demand for native skilled workers, increasing their wage, and thus increasing the wage difference between skilled and unskilled workers. In this case, the natives unskilled workers pay the cost of immigration.
- The opposite happens if immigration involves only skilled labor.



We can consider the same model also when taking into account heterogeneity in task (manual vs non manual), or with 2 goods traded internationally. In the latter, the country tend to specialize in the good market that has higher labor supply,

One key aspect is that the partition between the groups is based on the signal each individual conveys to the employer about its productivity, for instance it can be the education level (degree).

Finally, in this setting there can be a relocation of workers and firms. Indeed:

- Native workers will try to move toward occupations to enjoy complementarities with the skillset of the newcomers, through geographical mobility or skill upgrading.
- Firms invest more in technologies that make a larger use of the skill task combination that has become cheaper.
- Migrants may react with skills downgrading and may be forced to carry out occupations that require a lower level of skills than the level they have while try to adapt (i.e. learning in the local language).

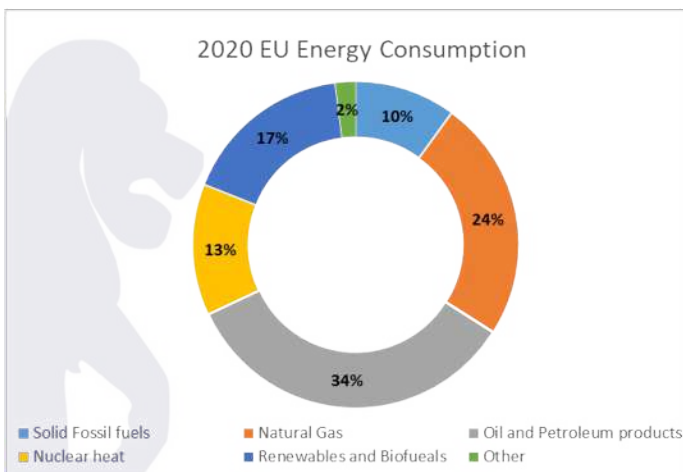
## Final remarks and remedies

We conclude with a remark on refugee migration, and the consequences on labor market, the spillover on population and the regulatory problems emerging in hosting countries. There is less gradualism in refugee migration, which generates higher waves of inflows than economic migration. Also in the Ukrainian case, push factors dominate over pull factors, as refugees escape for survival, making it more difficult to get a good match between skills of migrants and the recipient labor market. Immigration may exert negative fiscal spillovers on the domestic population. A key issue are externalities, the inflows of newcomers in densely populated areas can

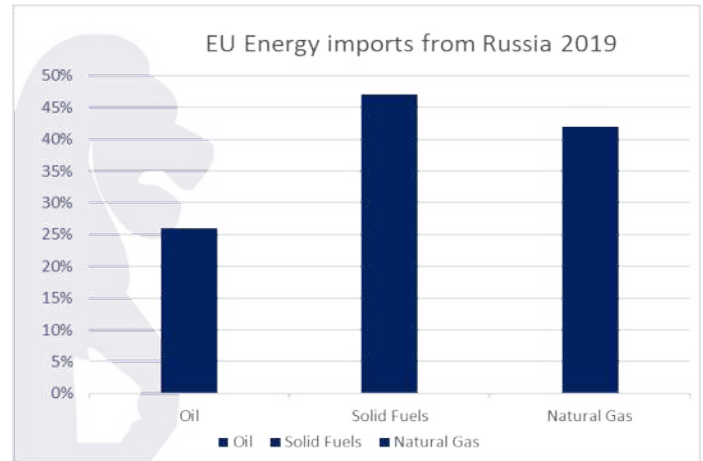
create congestion problems. An example is the increasing demand for housing that will increase prices, increasing living cost, and consequently decrease the natives' real wage. This can be relieved through: quicker integration of migrants in the labor market, more restricted access to welfare to migrants, and the adoption of a points system. Moreover, regulation should shorten the asylum procedures length make it unclear whether refugees will stay or not, discouraging incentives to invest in their integration. By easing the bureaucratic process of asylum can make Ukrainians work as soon as they reach the country of destination rather than depend on social transfers while their asylum application is processed. Finally, the EU should harmonize regulations of refugee migration. This would allow refugees to apply for citizenship before reaching the country offering asylum and have some leverage as to where to locate within the chosen country, rather than being forced to go to some given "relocation areas".

## Current energy situation

Before talking about European energy policy it is first important to take a look at European energy consumption by source.

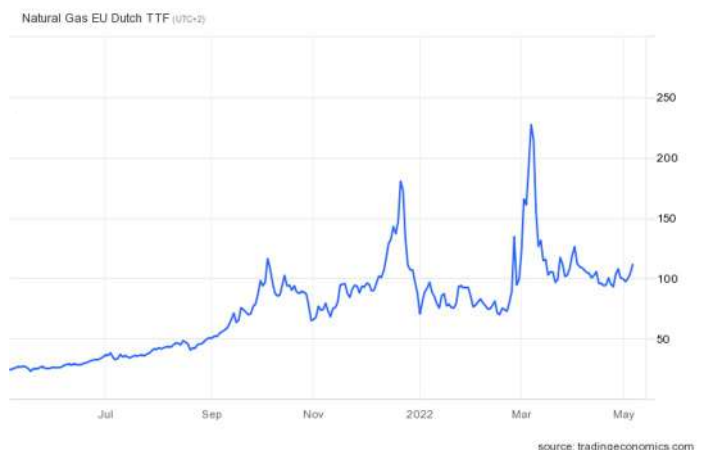


As we can observe traditional sources of energy (Gas, Solid fuels, and Oil) accounted for 68 percent of European energy consumption. While renewables accounted only for 17 percent. What's worse is that Europe is strongly dependent on Russian imports for many of these energy sources. As can be seen below Russia plays a significant role as a contributor to EU energy imports.



## Short term strategy

On the 4<sup>th</sup> of May, the EU announced it will be banning Russian imports of oil just a month after banning imports of coal. This drastic measure is sure to increase Oil prices. Still, there is a worry Russia might retaliate by turning off its supply of gas to Europe, as it did to Poland and Bulgaria when their governments refused to pay their bills in rubles. As gas is the most critical resource imported from Russia by the EU. This could lead to even higher prices which are already testing consumers with new highs established in the last two months. This cost push inflation is very dangerous as there is no guarantee that higher interest rates will lower demand enough for prices to stay stable. Therefore there is a possibility we could see the dreaded stagflation as we did in the 70's



Therefore in the short term, the EU will be focused on keeping prices from skyrocketing so European consumers don't need to be burdened with this cost. This risk will be especially exacerbated come winter as 39 percent of residential heating is supplied by gas, as reported by FT

### Medium term strategy

In the medium term, we can expect Europe to pursue a strategy of energy security by expanding and diversifying its energy imports from potential partners such as Norway. Additionally many are speculating this might be a moment of shifting policy towards nuclear energy. Nuclear is looking better mostly for its lack of emissions and independence from Russia.

### Long term strategy

In the long term, we can expect Europe to continue pursuing its goal of carbon neutrality by 2050. For sure this will lead to higher investments into composite materials, used to manufacture wind turbines, solar panels, and other sustainable sources of energy. While simultaneously developing an energy independence from Russia, laying itself more with its ideological allies such as the US. In summary Although the crisis looks dire it presents a unique opportunity of reforming the European energy sector for the better.



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